

Thermal Coagulation of Tissue During Tissue Resection

ABSTRACT

5 Methods for performing coagulation necrosis of biological tissue are provided.
The methods include configuring electrode arrays to provide balanced energy density in
target tissue volumes using two or more pair of electrodes. The electrode array
configuration includes at least one of irregular spacing between one or more pairs of
electrodes and one or more electrode diameters. The methods further include deploying
10 each electrode of an array at a selected depth in the target tissue volume in accordance
with the configuration. Energy is then delivered to the target tissue volume using power
sources coupled to the electrodes. The methods control power delivery in response to at
least one of elapsed time of delivery, temperatures of the target tissue volume, and
impedance levels in the target tissue volume to provide balanced or uniform energy
15 throughout the target tissue volume. The methods generate planes of coagulated tissue.